

CZECHOSLOVAKIA/Analytic Chemistry. Analysis of Organic
Substances.

E

Abs Jour: Ref Zhur-Khin., No 23, 1958, 77352.

Author : Vecera M., Snobl D.

Inst :

Title : Organic Quantitative Analysis. XII. Statistical
Evaluation of Methods of Elementary Organic Micro-
analysis.

Orig Pub: Collect. ~~czechosl.~~ chem. commun., 1958, 23, No 4, 636-648.

Abstract: See RZhKhin, 1958, 46436.

Card : 1/1

92

CZECHOSLOVAKIA/Analytic Chemistry. Analysis of Organic
Substances.

E

Abs Jour: Ref Zhur-Khim., No 23, 1958, 77363.

Author : Vecera M., Gasparic J., Spevak A.

Inst :

Title : Identification of Organic Substances. XIX. Microidenti-
fication of Aromatic Aliphatic Alcohols, O-Alkyl
and N-Alkyl Groups with Paper Chromatography.

Orig Pub: Collect. czechosl. chem. commun., 1958, 23, No 4, 768-770.

Abstract: See RZhKhim., 1958, 46452.

Card : 1/1

COUNTRY : Czechoslovakia E-3
CATEGORY : Analytical Chemistry. Analysis of Organic
Substances.
ABS. JOUR. : RZKhim., no. 1959, No. 23133
AUTHOR : Petranek, J.; Vecera, M.
INST. :
TITLE : Quantitative Organic Analysis. XVI. Colori-
metric Determination of Small Amounts of
Aldehydes.
ORIG. PUB. : Collect. czechosl. chem. commun., 1958, 23,
No 7, 1193-1196
ABSTRACT : See RZnKhim, 1958, 67346.

CARD: 1/1

COUNTRY : Czechoslovakia E-3
CATEGORY : Analytical Chemistry, Analysis of Organic
Substances,
ABS. JOUR. : RZhKhim., No. 1958, No. 23128
AUTHOR : Vecera, M.; Spevak, A.
INST. :
TITLE : Quantitative Organic Analysis. XVII. Determination of Small Amounts of Chlorine and Bromine in Organic Substances.
ORIG. PUB. : Collect. czechosl. chem. commun., 1958, 23, No 7, 1197-1201
ABSTRACT : See RZhKhim, 1958, 73760.

CARD: 1/1

CZECHOSLOVAKIA / Analytical Chemistry. Analysis of Organic Substances. E

Abs Jour: Ref Zhur-Khim, No 12, 1959, 42138.

Author : Vecera, M.; Synek, L.
Inst : Czechoslovakian Chemical Society.
Title : Organic Quantitative Analysis. XVIII. Microdetermination of Carbon and Hydrogen Using Cobalt Mixed Oxide as Combustion Catalyst.

Orig Pub: Collect. czechosl. chem. commun., 1958, 23, No 7, 1202-1212.

Abstract: No abstract. See Ref Zhur-Khim, No 2, 1959, 4378.

Card 1/1

CZECHOSLOVAKIA/Analytical Chemistry. Analysis of Organic
Substances.

B-3

Abs Jour : Ref Zhur - Khimiya, No 2, 1959, No 4393

Authors : Vlceera, M.; Gasparic, J.; Jurecek, M.

Inst : Not given

Title : The Identification of Organic Compounds. XX. Addition Pro-
ducts of Hg(II) With Alkylbenzylsulfides.

Orig Pub : Chem Listy, 52, No 1, 144-146(1958)

Abstract : The addition products (AP) of HgCl₂ with methyl, ethyl, n-pro-
pyl, iso-propyl, and n-butylbenzylsulfide and with dibenzylme-
thylphenyl and n-propylphenylsulfide have been prepared by
a previously described method (rZhKhim, 1957, 15900) and their
properties and constitution have been determined. The proper-
ties of the AP of the alkylbenzylsulfides are similar to the
properties of the aliphatic sulfide derivatives described in
an earlier report. On crystallization from alcohol the Hg

Card 1/2

CZECHOSLOVAKIA/Analytical Chemistry. Analysis of Organic
Substances.

E-3

Abs Jour : Ref Zhur - Khimiya, No 2, 1959, No 4393

content is decreased; such a decrease, however, is not observed when the recrystallization is carried out in C_6H_6 . The AP of diphenyl, methylphenyl, and n-propylphenylsulfide are prepared in aqueous medium by shaking a solution of $HgCl_2$ with the respective sulfide. The last-named AP are unstable; e. g., the AP with methylphenylsulfide loses nearly all the sulfide on standing in air for 20 days, whereas the AP obtained with n-butylbenzylsulfide shows no changes under the same conditions. The sulfide/ $HgCl_2$ mole ratio in all the AP investigated is 1 : 1 or 1 : 2. Equilibrium according to the reaction $R_1-S-R_2 + HgCl_2 \rightleftharpoons R_1(R_2)S \cdot HgCl_2$ is established very rapidly and, for the aliphatic-aromatic sulfides, is shifted considerably to the left. For Communication XIV see RZhKhim, 1958, 46452.

Card 2/2

Večera, Miroslav

CZECHOSLOVAKIA/Analytical Chemistry. Analysis of Organic Substances.

E

Abs Jour: Ref Zhur-Khim., No 9, 1959, 31102.

Author : Večera, Miroslav, Gasparič, Jiri.

Inst :

Title : Identification of Organic Substances. XXIII. Paper Chromatographic Study of Aliphatic Amines.

Orig Pub: Chem. listy, 1958, 52, No 4, 611-617.

Abstract: This study deals with aliphatic amine (A) breakdown on paper. Optimum conditions for the separation were selected. The commonly used neutral and acid mixtures of the solutions are not suitable. In neutral systems the R_f value and the shape of the blots depends on the anion of the salt of (A) and on the degree of hydrolysis of the

Card : 1/4

acid systems. ¹¹⁰ by using a n-C₄H₉OH - saturated KCl solution neutral mixture, and paper saturated with KCl. At the same time all salts of (A) are transformed into chlorides and the shifting of A does not depend on the anion of the original salt. The primary (A) (Pi) are separated. The primary (A) (Pi) are opened at 100° by means of 0.2% solution of ninhydrin in alcohol, acidified with CH₃COOH and the spots are fixed by sprinkling with 1% solution of Cu(NO₃)₂ in 90% alcohol acidified with dilute HNO₃. The secondary (A) (Sk) are opened by means of the solution of Na nitroprusside, of acetaldehyde and of Na₂CO₃, and the

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Card : 2/4

CZECHOSLOVAKIA/Analytical Chemistry. Analysis of Organic Substances.

E

Abs Jour: Ref Zhur-Khim., No 9, 1959, 31102.

tertiary (A) (Ti) are opened with undiluted Dragendorff's solution. The chlorides are opened by sprinkling with 5% solution of AgNO₃, the chromatogram is rinsed and is sprinkled with Na₂S solution. For opening the sulphates 0.2% water solution of BaCl₂ is used and 0.05% solution of Na rhodizonate in 50% alco-

CZECHOSLOVAKIA / Analytical Chemistry. Organic Analysis. E

Abs Jour : Ref Zhur - Khimiya, No 23, 1959, No. 82020

Author : Večera, Miroslav; Bulusek, Jaroslav

Inst : Not given

Title : Organic Quantitative Analysis. XX. The Study of the Micro Method for the Determination of Chlorine in Organic Substances by Combustion in an Empty Tube

Orig Pub : Chem. listy, 1958, 52, No 8, 1526-1536;
Collect. Czechosl. Chem. Commun., 1959, 24,
No 5, 1630-1642

Abstract : A rapid and simple micro method for the determination of Cl is described, and the causes of possible errors are discussed in detail. 1-6 mg of the substance is placed in a Pt boat and burned for 15 minutes in a

Card 1/3

CZECHOSLOVAKIA / Analytical Chemistry. Organic Analysis. E

Abs Jour : Ref Zhur - Khimiya, No 23, 1959, No. 82020

tube (T) with a porous quartz insert heated by a portable (800°) and stationary (720°) electrical ovens in an O₂ stream (15 ml/min). Cl is trapped in an absorber, which is indirectly connected to (T) and which contains 2 ml 5% H₂O₂. After combustion, the solution is washed off from the absorber with 18 ml of alcohol; 5 drops of 0.02% aqueous Brilliant Yellow (adsorption indicator) solution and 0.1 N. KOH solution are added, resulting in a weakly alkaline solution; this is neutralized with 0.1 N. CH₃COOH; one more drop of CH₃COOH solution is added, and this is titrated with 0.01 N. AgNO₃ solution to the color change from greenish-yellow to orange and the simultaneous appearance of turbidity. In the

Card 2/3

CZECHOSLOVAKIA / Analytical Chemistry. Organic Analysis. E

Abs Jour : Ref Zhur - Khimiya, No 23, 1959, No. 82020

presence of SO_4^{-2} the color change is worse, therefore, in the analysis of substances containing S. Fibek's method is used for the titration (RZ Khim, No 2, 1958, No. 4320). In the calculation, a correction is made for the blank (0.014 ml 0.01 N. AgNO_3 solution). The results of the analyses of 1,5-dichloroanthraquinone, DDT, 2,4-dinitrochlorobenzene, hexachlorocyclohexane, and chlorobenzene are given. The maximum error is $\pm 0.3\%$; the average statistical error is 0.02%. For part XIX, see RZ Khim, No 18, 1959, No. 64206. --
K. Kamen

Card 3/3

33

VECERA, MI

CZECHOSLOVAKIA/A analytical Chemistry - Organic Analysis.

E

Abs Jour : Ref Zhur Khimiya, No 20, 1959, 71282

Author : Snobl, Dobroslav; Kadanikova, Vera; Petranek, Jaromir; Vecera, Miroslav

Inst : -

Title : The Identification of Organic Substances. XXVI.
The X-Ray Patterns of S,S-Dialkyl-N-p-toluenesulfonyl-sulfurylamines in Powders

Orig Pub : Chem. listy, 1958, 52, No 8, 1537-1545

Abstract : For the identification of thiobethers (TE) x-ray powder patterns 1 - of the corresponding S,S-dialkyl-N-p-toluenesulfonylsulfurylanines (DT) were used successfully. 0.005 moles chloramine-T in 10 ml CH₃OH are mixed with an equal volume of TE solution in CH₃OH having the same concentration, the solvent is evaporated, and the residue washed with 5 ml 2 N.NaOH solution and 20 ml water, dissolved in 10 ml

Card 1/2

COUNTRY : Czechoslovakia E-3
 CATEGORY : Analytical Chemistry--Analysis of organic substances
 ABS. JOUR. : RZKhim., No. 22 1959, No. 75282
 AUTHOR : Gasparic, J., Vecera, M., and Jurecek, M.
 INST. : Not given
 TITLE : The Identification of Organic Compounds. XXVII. The Application of Friedel-Crafts Acylation in the Identification of Alkylarylsulfides
 ORIG. PUB. : Chem Listy, 52, No 9, 1720-1725 (1958); Collection Czechoslov Chem Commun, 24, No 6, 1859-
 ABSTRACT : A new method is proposed for the identification of alkylarylsulfides (AAS), based on their acylation by the Friedel-Crafts method, conversion of the alkylmercaptoacetophenones (AMAP) obtained to the corresponding 2,4-dinitrophenylhydrazones (DNPH), oximes, or alkylsulfonylacetophenones (ASAP), and identification of the latter by their mp's. The acylation of the AAS was carried out by a modification of the method of Cutler (R. A. Cutler et al, J Amer Chem Soc, 74, 5475 (1952))

CARD: 1/5

7145

103

COUNTRY : Czechoslovakia E-3
 CATEGORY :

ABS. JOUR. : RZKhim., No. 22 1959, No. 75282

AUTHOR :
 INST. :
 TITLE :

ORIG. PUB. :

ABSTRACT : by the gradual addition of 0.5 ml CH₂Cl₂ and of a solution of 0.5 ml AAS in 5 ml CHCl₃ to a cooled mixture of 0.8 gm anhydrous AlCl₃ and 5 ml CHCl₃; the reaction mixture is allowed to stand for 1 hr at room temperature under moisture-free conditions, after which it is poured over a mixture of ice and 5 ml conc HCl; the lower layer is separated, washed with 5% HCl and a 5% solution of NaHCO₃, filtered, the CHCl₃ is distilled off, and the AMAP residue is dissolved and converted to the respective derivative. The DNPH are prepared

CARD: 2/5

COUNTRY : Czechoslovakia
 CATEGORY :

E-3

COUNTRY : Czechoslovakia
CATEGORY :

ABS. JOUR. : RZKhim., No. 22 1959, No.

78582

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT :

AMAP residue in 5 ml glacial CH_3COOH with 5 ml 30% H_2O_2 over a boiling water bath; the gradual addition of water (total 50 ml) results in the separation of white crystals which are recrystallized from water. The mp of the DNPH, oximes, and ASAP obtained from a large number of AAS are given together with a characterization of the diffraction patterns of the DNPH. The DNPH derivatives are most convenient for identification purposes as they are readily prepared, crystalize easily, and have the best defined

CARD: 4/5

COUNTRY : Czechoslovakia E-5
CATEGORY :
ABST. JOUR. : RZhKhim., No. 22 1959, No. 72362
AUTHOR :
INST. :
TITLE :
ORIG. PUB. :
ABSTRACT : mp's. For Communication XXVI see RZhKhim,
1959, No 20, 71282.
J. Vanecek

CARD: 5/5

105

VECERA, M.

Organic quantitative analysis. XXI. A new method for the determination of nitrogen with cobalt oxides as combustion catalysts. M. Vecera and L. Synek (*Vězkuný ústav org. syntesy, Pardubice-Rybitví, Czech.*). *Collection Czechoslov. Chem. Commun.* 24, 3402-6(1959); cf. *C.A.* 54, 173c.—Detn. of N is carried out by burning the org. compd. at 800-50° in a stream of CO₂ and O over a layer of cobaltous and cobaltic oxides (*C.A.* 51, 16207c) held at 750°; the excess O being absorbed by a layer of Cu wire at 550°. The analysis lasts 15 min., the combustion 8-10 min., and requires 2-5 mg. of material. M. Hudlický—

bc
41

4
AEZ
1-11-59

VECEFA, M

Identification of organic compounds. XXXI. Identification of sulfides. J. Petránek, M. Večeta, and M. Jureček (Výzkumný ústav org. syntez, Pardubice-Rybitví, Czech.). *Collection Czechoslov. Chem. Commun.* 24, 3037-42 (1959) (in German); cf. *C.A.* 54, 306h.—The method is based on the conversion of sulfides into *S,S*-dialkyl-*p*-nitrobenzenesulfonylsulfilmines RRS: NS₂OC₆H₄NO₂ (I) by reaction with *p*-NO₂C₆H₄SO₂NCINa (II). A soln. of 400 mg. II in 5 ml. MeOH mixed with a soln. of 1.5 millimoles sulfide in 5 ml. MeOH, the mixt. let stand 15 min. (in the case of alkylphenyl sulfides 12 hrs. or acidified with 1 ml. 1% HCO₂H in MeOH), the solvent distd. off, the rest washed with 5 ml. 2*N* NaOH and 20 ml. H₂O, the product recrystd. from C₆H₁₁cyclohexane, or in the case of sparingly sol. derivs. from CHCl₃-cyclohexane, gives the following I (alkyls and m.p. given): di-Me, 137.5-8.5°; Me, Et, 107-7.5°; di-Et, 137.5-8.5°; Me, Pr, 128.5-9.5°; Me, Bu, 96-7°; Me, *sec*-Bu, 110-12°; Et, Pr, 135.5-8.0°; Et, iso-Pr, 140-1.5°; Et, Bu, 93-4°; Et, iso-Bu, 128-0°; di-Pr, 121.5-2.5°; Pr, iso-Pr, 151-2°; di-iso-Pr, 136-8°; Pr, *sec*-Bu, 111-12°; Pr, Bu, 181-2°; Pr, iso-Bu, 116-10.5°; iso-Pr, Bu, 124.5-5.0°; iso-Pr, iso-Bu, 144-5°; iso-Pr, *sec*-Bu, 80-7°; di-Bu, 99-100°; Bu, iso-Bu, 119-20°; Bu, *sec*-Bu, 100-1°; di-iso-amyl, 111-13°; pentamethylene, 194-4.5°; Me, Ph, CH₃, 185.5-0.5°; Et, PhCH₃, 156-0.5°; Pr, PhCH₃, 117.5-18°; Bu, PhCH₃, 158.5-0.0°; di-PhCH₃, 232-3°; di-Me, Ph, 164-6°; Et, Ph, 117-18°; Pr, Ph, 109-10°; di-Ph, 160-1°; Et, *p*-C₆H₄Me, 144.5-5.0°. The principal side reaction leads to formation of *p*-nitrobenzenesulfonamide and sulfoxide esp. in acid medium and in sulfides with branched alkyls; however, they do not interfere with the identification procedure. Mixts. of I can be sepd. on silica gel columns satd. with HCONH₂, and eluted with CH₂Cl₂-cyclohexane, provided their alkyls differ in the no. of C atoms, whereas isomers and metamers cannot be sepd. by partition chromatography.

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CZECHOSLOVAKIA / Analytical Chemistry. Organic Analysis. E

Abs Jour : Ref Zhur - Khimiya, No 23, 1959, No. 82040

Author : Vecera, M.; Gasparić, J.

Inst : Not given

Title : Identification of Organic Substances. XXIII.
The Paper Chromatographic Study of Aliphatic
Amines

Orig Pub : Collect. Czechosl. Chem. Communs., 1959, 24,
No 2, 465-473

Abstract : See RZ Khim, No 9, 1959, No. 31102

Card 1/1

COUNTRY : ~~USSR~~
CATEGORY :
ABS. JOUR. : RZhKhim., No. 1959, No. 282
AUTHOR : Vecera, M.; Gasparic, J.; Jurecek, M.
INST. :
TITLE : Identification of Organic Compounds. XX.
Addition Products of Mercury (2+) Chloride
and Alkylbenzylsulfides.
ORIG. PUB. : Collect. Czechosl. Chem. Commun, 1959, 24,
No 2, 640-642
ABSTRACT : See RZhKhim, 1959, No 2, 4393

CARD:

120

JURECEK, M.; HUBIK, M.; VECERA, M.

Identification of organic compounds. Part 34: Identification of aliphatic ether. Coll Cz Chem 1458-1467 My '60.

1. Institut für analytische Chemie, Technische Hochschule für Chemie, Pardubice und Forschungsinstitut für organische Synthesen, Pardubice-Rybitvi.

VECERA, M.; VOJTECH, F.; SYNEK, L.

Quantitative organic analysis. XXII. New method for rapid automatic combustion of organic substances; microdetermination of carbon and hydrogen. Coll Cz Chem 25 no.1:93-100 Ja '60. (EEAI 9:12)

1. Forschungsinstitut für organische Synthesen, Pardubice-Rybitvi.
(Chemistry, Analytic-Quantitative)
(Combustion) (Organic compounds)
(Carbon) (Hydrogen)

VECERA, M.; VOLAKOVA, B.; KOZAKOVA, M.; JURECEK, M.

Identification of organic substances. Part 32: Identification and separation of aliphatic primary amines as N-alkyl-3,5-dinitrobenzamide. Coll Cz Chem 25 no.5:1281-1286 My '60.

1. Forschungsinstitut für organische Synthesen, Pardubice-Rybitvi und Institut für analytische Chemie, Technische Hochschule für Chemie, Pardubice.

VECERA, M.; SYNEK, L.; STERBA, V.

Rearrangement of aromatic hydrazo compounds. IV. Study of the acid catalysis and the effect of the medium and the temperature on rearrangement of hydrazobenzene. Coll Cz Chem 25 no.8:1992-2004 Ag '60. (EEAI 10:9)

1. Forschungsinstitut für organische Synthesen, Pardubice-Rybitvi.

(Hydrazo compounds) (Aromatic compounds) (Rearrangements)
(Catalysis) (Hydrazobenzene)

VECERA, M.; PETRANEK, J.

Rearrangement of aromatic hydrazo compounds. V. Kinetics of 4-chloro-, 3,3-dichloro- and 4,4-dichlorohydrazobenzene; isolation and identification of the reaction products. Coll Cz Chem 25 no.8:2005-2012 Ag '60. (EEAI 10:9)

1. Forschungsinstitut für organische Synthesen, Pardubice-Rybitví.

(Hydrazo compounds) (Aromatic compounds) (Rearrangements)
(Chlorohydrazobenzene) (Dichlorohydrazobenzene)

VECERA, M.; SNOBL, D.

Quantitative organic analysis. XXV. Study of the external absorption of nitrogen oxide by manganese dioxide in carbon and hydrogen determination. Coll Cz Chem 25 no.8:2013-2021 Ag '60.
(EEAI 10:9)

1. Forschungsinstitut für organische Synthesen, Pardubice-Rybitvi.

(Manganese oxides) (Carbon) (Hydrogen)
(Nitrogen oxides)

VECERA, M.

Organic quantitative analysis. Part 29: Automatic microscopic determination of carbon and hydrogen in organic substances. Coll Cz Chem 26 no.9:2298-2307 '61.

1. Forschungsinstitut für organische Synthesen, Pardubice-Rybitví.

(Carbon) (Hydrogen)

VECERA, M.

Organic quantitative analysis. Part 30: Automatic microscopic determination of nitrogen in organic substances. Coll Cz Chem 26 no.9: 2308-2315 '61.

1. Forschungsinstitut für organische Synthesen, Pardubice-Rybitvi.

(Nitrogen)

VECERA, M.; STERBA, V.

"Carbon-14 compounds" by J.R. Catch. Reviewed by M. Vecera
and V. Sterba. Chem prum 12 no,9:511-512 S '62.

1. Vyzkumny ustav organickych syntez.

UECERA, M.

27

Prague, Collection of Czechoslovak Chemical Communications, Vol. 27, No. 4, April 1962 (continued)

37. "Qualitative Determination of Trivalent German Salts with Periodate," J. KOCHEK, S. KESLER and J. ZITKA of the Institute for Analytical Chemistry at Charles University, Prague; P4031-1033.

38. "Organic Quantitative Analysis. Part XXXI. The Micro Determination of German Salts by Means of the Reaction of the German Salts with Periodate," J. KOCHEK and J. ZITKA of the Institute for Analytical Chemistry at Charles University, Prague; P4031-1031.

39. "Methods of Separating Natural Substances. Part V. The Separation of Morphine in Extracts from Poppy Shells," J. KOCHEK, J. BUDAK, M. V. BUDAK and Z. COKAL, Research Institute for Natural Drugs, Prague; pp 1031-1037.

40. "Spectrophotometric Determination of Haptoglobin with the Modified Coumal and Scyllas Method," J. PIVRKA of the Production Station at the [Medical] Faculty in Brno; pp 1043-1045.

41. "Gas-Fluid Chromatography. The Relation between the Distilled Nitrogen Volume and the Molecular Fraction of Organic Compounds," S. J. VODNÝ, Chair of Organic Technology at the Chemical-Technological Institute in Prague; pp 1045-1048.

42. "Preoxidation of an Unidentified Component of Wood Acetone. Part II. Determination of the Ratio of the Elements of Cryptopyrene I and III Following Paper-Chromatographic Separation," V. HEDVÍČKA, Institute for Work Systems and Occupational Diseases, Prague; pp 1049-1053.

43. "Phthalic Acid Compounds and Their Analogs. Part VIII. Reaction of Isoal and of the Its Analogs with Selenious Oxide," M. PRYDIL and J. GRP, Institute of Organic Chemistry and Biochemistry at the Czechoslovak Academy of Sciences, Prague; pp 1054-1056 (English article).

44. "Synthesis of 5-Dimethyl-uridin," J. ŠEBE, Department of Organic Synthesis at the Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague; pp 1056-1058.

45. "Plant Substances. Part XIII. Tannic Acid, the Higher Principles of Tannic Acid," M. ŠEBE, Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague; pp 1059-1060 (English article).

2

SNOBL, D.; KADANIKOVA, V.; VECERA, M.

CSSR

Research Institute for Organic Syntheses, Pardubice-Rybitvi (for all)

Prague, Collection of Czechoslovak Chemical Communications, No 2, 1963
pp 436-443

"Identifying Organic Compounds XLIV. Roentgenographic Identification of
S-1-Naphthylmethylthiuroniumsalts of Homologous Mono- and Dicarbox-
acids"

(3)

VECERA, M.

CZECHOSLOVAKIA

NEPRAS, M; VECERA, M; BORECKY, J; JURECEK, M.

1. Research Institute of Organic Synthesis (Forschungsinstitut für organische Synthesen), Pardubice-Rybitvi; 2. Technical Higher School of Chemistry (Technische Hochschule für Chemie), Pardubice

Prague, Collection of Czechoslovak Chemical Communications,
No 10, 1963, pp 2706-2714

"Identification of Organic Compounds. I. Identification of Mono- and Dichloranthraquinones."

(4)

VECERA, M., inz.

Perception of projected image unsteadiness. Jemna mech opt
8 no.10:310-313 0 '63.

1. Vyzkumny ustav zvukove, obrazove a reprodukni techniky,
Praha.

VECERA, Miloslav, inz.

Effect of the use of potash and phosphatic fertilizers on the
yield of permanent meadows. Vest ust zemedel 10 no.8:287 '63.

SNOBL, D.; KADANIKOVA, V.; VECERA, M.

Identification of organic compounds. Pt.44. Coll Cz Chem 28
no.2:436-443 F '63.

1. Forschungsinstitut für organische Synthesen, Pardubice -
Rybitvi.

NEPRAS, M.; VLCERA, M.; BORECKY, J.; JURIGEN, M.

Identification of organic compounds. No. 50. Coll Cz Chem
28 no.10:2706-2715 0 '63.

1. Forschungsinstitut für organische Synthesen Pardubice-
Rybitvi und Technische Hochschule für Chemie, Pardubice.

LAKOMY, J.; LEHAR, L.; VECERA, M.

Organic quantitative analysis. Pt. 35. Coll Cz Chem 22
no. 12:3271-3277 D '63.

1. Forschungsinstitut für organische Synthesen, Pardubice-
Rybitvi.

VECERA, M.

"Organic elemental microanalysis" by G.Ingram. Reviewed by
M. Vecera. Coll Cz Chem 29 no.2:561-562 F '64.

DOKLADALOVA, J.; KORBEL, E.; VECERA, M.

Organic quantitative analyses. Pt. 36. Coll Cz chem 29 no.8:
1962-1964 Ag '64.

1. Naturwissenschaftliche Fakultät, Palacky-Universität, Olomouc,
und Forschungsinstitut für organische Synthesen, Pardubice-Rybitvi.

REPRODUCTION PERMITTED

3/0030/54/000/007/0.07/0201

AUTHOR: Vecera, H. (Engineer)

TITLE: Photographic processing of television test patterns

SOURCE: Vopr. mekhanika i optika, no. 2, 1964, 140-151

TOPIC TAGS: photography; processing; test patterns

Abstract: This paper describes the method of photographic processing of television test patterns. The method is based on the use of a special photographic film and a special processing technique. The results of the processing are shown and discussed.

ACCESSION NR 100 4955

ASSOCIATION: YUZORT, Prague

SUBMITTED: 12 May 64

ENCL: 00

SUB CODE: 37, 30

Cont 2/2

CERNY, J., inz.; MCEFA, M., inz.

Endless film loops. Jemna mech opt 5 no.9:275-277 S '60.

1. Vyzkumny ustav zvukove, obrazove a reprodukcní techniky, Praha.

Cobordination salts of bivalent silver. A. Okáč and Z. Vedeň. *Chem. Listy* 40, 311-13 (1946).—The expts. of Barbieri (*C.A.* 28, 2201⁹) were duplicated. Ag α -picolinate was prepd. and oxidized with 5% $K_2S_2O_8$ to give a compl. $CuH_2N_2O_4Ag$. The salt has strong oxidizing action on HBr, H_2O_2 , benzidine, PhNH₂, SbCl₅, and MeOH. The Co(III) salt was also prepd. M. Hudlický

L 3761-66

ACC NR: AP5027866

compared to a standard ferrosilicon. Calibrating curves using samples 20x20x10 mm are shown. Total time required for analysis is 7 mins, accuracy equals gravimetric methods. Orig. art. has: 6 tables, 1 figure.

ASSOCIATION: Statni vyzkumny ustav materialu a technologie, slevarensky vyzkum, Brno (Foundry Section, State Research Institute of Materials Technology)

SUBMITTED: 00

ENCL: 00

SUB CODE: MM, EC

NR REF SOV: 002

OTHER: 001

JPRS

PC
Card 2/2

L 34434-66 EWP(k)/EWP(h)/EWP(l)/EWP(v)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AF6026202

SOURCE CODE: CZ/0034/65/000/011/0808/0811

AUTHOR: Bieber, Boleslav (Engineer; Doctor; Candidate of sciences); Vecera, Zdenek²⁸
(Doctor of natural sciences) B

ORG: State Research Institute of Materials--Foundry Research, Brno (Statni vyzkumny
ustav materialu, slevarensky vyzkum)

TITLE: Use of the FES-1 photoelectric stylometer¹⁴ in analyses of metals. IV. ⁶
Determination of aluminum, molybdenum, vanadium, titanium and copper in cast iron

SOURCE: Hutnicke listy, no. 11, 1965,²⁷ 808-811

TOPIC TAGS: cast iron, photoelectric cell, metal chemical analysis

ABSTRACT: The article gives details of a method used to determine aluminum, molybdenum, vanadium, titanium and copper in cast irons and fused specimens of cast iron with the FES-1 stylometer. The results are presented in tabular form and are discussed. Orig. art. has: 10 tables. [JPRS: 33,732]

SUB CODE: 11 / SUEM DATE: none / ORIG REF: 002

Card 1/1 92

ACC NR: AP6026072

SOURCE CODE: CZ/0034/65/000/012/0888/0889

AUTHOR: Vecera, Zdenek (Doctor of natural sciences); Bieber, Boleslav (Engineer; Doctor; Candidate of sciences)

70
B

ORG: Foundry Research Department, State Research Institute for Construction Materials, Brno (Statni vyzkumny ustav materialu, Slovarensky vyzkum)

TITLE: Photometric determination of small amounts of lead in cast iron

SOURCE: Hutnicke listy, no. 12, 1965, 888-889

A

TOPIC TAGS: cast iron, photometric analysis, lead, chemical reduction, colorimetric analysis, quantitative analysis, metal purification

ABSTRACT: The sample is dissolved in hydrochloric acid and the iron removed by extraction with methylisobutyl ketone and iso-amyl acetate. Hydrochloric acid is evaporated, tartrate and cyanide are added, and lead is reduced by ascorbic acid in an ammoniacal medium. After the addition of cupral, lead is extracted by absorbing it in carbon tetrachloride. Addition of copper sulfate produces a copper salt of cupral. The resulting brown coloring is measured colorimetrically. The accuracy of the determination is $\pm 0.0002\%$ when the Pb content is in thousandths of a %, and $\pm 0.001\%$ when the lead content is in the hundredths of a %. The amount weighed out is 1 g. Pb can be determined even in the presence of some of the alloying metals. Orig. art. has: 3 tables. JPRS: 34,272
SUB CODE: 11, 07, 20 / SUBM DATE: none / ORIG REF: 004 / OTH REF: 010

Card 1/1

0976

1100

VECEK, J.

CS&R

Bratislava, Farmaccuticky Obzor, No 1, 1963, pp 32-33

"Using Pharmacy Windows for Health Training"

(1)

VECERA, A.

TECHNOLOGY

PERIODICALS: HUTNICKE LISTY Vol. 13, no. 9, Sept, 1958

VECERA, Z.: BIEBER, B. Photometric determination of borium in technical iron in a solution of sodium peroxide. p. 808

Monthly List of East European Accessions (EEAI) LC Vol. 8, No. 5
May 1959, Unclass.

VECFRA, J.

Bridges in the Slapy barrage. p. 368.

STAVBY. Praha. Vol. 2, no. 10, Oct. 1954

SOURCE: East European Accessions List (EFAL), LC, Vol. 5, no. 3, March 1956

VECERA, K.

Experiences from a visit in a Soviet foundry, p. 129, SLEVARENSTVI
(Ministerstvo strojiernstvi a Ministerstvo hutniho prumyslu a rudnych
dolu) Praha, Vol. 3, No. 5, May. 1955

SOURCE: East European Accessions List (EEAL) Library of Congress,
Vol. 4, No. 12, December 1955

VEČERA K.

3

Production of Cast Steel in Small Converters. B. Bradáč and K. Večera. *(Střelnictví, 1955, 3, (2), 42-44).* [In Czech].
By a duplex method, utilizing the cupola, the 1-ton converter, and the basic electric-arc furnace, steels of the highest quality can be efficiently and economically produced. The features, advantages, and disadvantages of the method, and the chemistry of the conversion, in both basic and acid converters, are discussed.—P. F.

①
D. J. [Signature]

Distr: 4E2c

27

Determination of uranium with cupferron in the presence of ammonium ethylenediaminetetraacetate. B. Bieber and Z. Večera. *Collection Czechoslov. Chem. Commun.* 24, 1074-6 (1959).—See C.A. 53, 1996c. M. Hudlicky

3

1

II

VI

8/1

SVEHLA, R., inz.; VESELA, Z. Jr.

Source of direct current arc for the spectral analysis.
Hut listy 19 no. 3:203-205 Br '64.

1. State Research Institute of Materials and Technology,
Welding Research Department, Brno.

~~VECERA~~ , Z.

27

Perchloric acid in the metallurgical laboratory. Holecav
Březner and Zdeněk Večera (Státní výzkumný ústav mate-
riálu technol., stěvárenský výzkum, Brno, Czech.). *Hvě-
zdické listy* 13, 637-9(1958).—In a short survey the proper-
ties of HClO₄, its use for analyses in the metallurgical lab.,
and the safety principals as well as the equipment of hoods
were described. 52 references. Petr Schneider

4

39

Country : CZECHOSLOVAKIA E
Title : Analytical Chemistry. Analysis of Inorganic Substances
Orig. Jour : Ref Zhur - Khim., No 9, 1959. No. 15085
Author : Bieber, B.; Vecera, Z.
Instit. : -
Title : Determination of Uranium by Means of Cupferron in the Presence of the Ammonium Salt of Ethylenediaminetetraacetic Acid
Orig. Pub. : Chem. listy, 1958, 52, No 3, 439-443
Abstract : A rapid gravimetric method for determination of U (+6), based on the precipitation of U from a neutral medium with two to threefold excess of a 2% aqueous solution of cupferron (C), is described. The composition of the yellow-orange precipitate of uranyl cupferronate (UC) which is being formed is expressed by the formula $UO_2(C_6H_5N_2O_2) \cdot C_6H_5N_2O_2 \cdot NH_4$. It was established thermogravimetrically that UC
Card: 1/7

E - 18

Country : CZECHOSLOVAKIA E
Category : Analytical Chemistry. Analysis of Inorganic
Substances
Obs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15085
Author :
Institut. :
Title :

Orig. Pub. :

Abstract : agree the selectivity of precipitation of UO_2^{+2} ;
Cont'd under these conditions, precipitation of Ag^+ ,
 Hg^{+2} , Pb^{+2} , Bi^{+3} , Cu^{+2} , Gd^{+2} , Mn^{+2} , Zn^{+2} , Co^{+2} ,
 Ni^{+2} , Ca^{+2} , Sr^{+2} and Mg^{+2} does not occur. Fe^{+3} ,
 Cr^{+3} , Th^{+4} and Ce^{+4} , as well as small quanti-
ties of Ti^{+4} and Zr^{+4} do not hinder the deter-
mination of U. The influence of Sb^{+3} , Sn^{+4} ,
 Al^{+3} , Ta^{+5} and Nb^{+5} is being masked by the

Cards: 3/7

E - 19

Country : CZECHOSLOVAKIA E
Category : Analytical Chemistry. Analysis of Inorganic Substances
Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15085
Author :
Institnt. :
Title :
Orig Pub. :
Abstract : addition of 3-5 g. of tartaric acid before the
Cont'd neutralization of the solution and precipita-
tion of U. Great quantities of Ti^{+4} and Zr^{+4}
must be removed by precipitation with the aid
of C in a medium of 10% H_2SO_4 , and Be - by pre-
cipitation with ammonia in the presence of ox-
alic acid. Even the presence of large quanti-
ties of Cl^- , SO_4^{-2} , NO_3^- , CrO_4^{-2} , MoO_4^{-2} ,
 WO_4^{-2} , acetate, citrate and oxalate anions, as
Card: 4/7

Country : CZECHOSLOVAKIA E
Category : Analytical Chemistry. Analysis of Inorganic
Substances
Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15085
Author :
Institut. :
Title :
Orig. Pub. :
Abstract : rated in a sand bath, diluted with water, and
Contid the precipitate of SiO_2 , CaSO_4 or PbSO_4 is fil-
tered off. To the chilled filtrate, EDTA solu-
tion is added first, and then a clear solution
which has been adjusted with ammonia to pH 7-8;
the precipitation of U is then effected with an
excess of C. The filtered off UC is washed with
0.2% C with the addition of EDTA, dried, roast-
ed at $800-1,000^\circ$ and suspended in the form of
 U_3O_8 . For three samples of uranium ore, the re-

Card: 6/7

BIEBER, Boleslav, dr. inz. CSc.; VICHKA, Zdenek, RNDr.

Use of the FES-1 photoelectric stylometer in metal analyses.
Pt. 2. Hut listy 19 no.12:882-884 D '64.

1. Foundry Research of the State Research Institute of Materials
and Technology, Brno.

Country : Czechoslovakia E-1
Category : Analytical Chemistry.
Abs. Jour. : Ref. Zhur - Khim., No 7, 1959 22955
Author : Bieber, B.; ~~Vecera, Z.~~
Institut. :
Title : The Use of Perchloric Acid in Metallurgical
Laboratories.
Orig. Pub. : Hutnicke listy, 1958, 13, No 7, 637-639

Abstract : Brief review of the properties of HClO_4 and
of its use in chemical analyses at metallurgical laboratories
including directions on safety measures to be observed in
working with HClO_4 . Bibliography 52 references.
Authors' summary.

Card: 1/1

CZECHOSLOVAKIA / Analytical Chemistry. Analysis of Inorganic Substances. E

Abs Jour: Ref Zhur-Khim, No 12, 1959, 42100.

Abstract: minutes until NaOH is transformed into NaHCO_3 ; 0.5-1 g. of FeSO_4 is added to reduce CrO_4^{2-} . The mixture is boiled again, mixed with pieces of filter paper, and passed through a paper filter. The deposit (compounds of Fe, Cr, Mn and Ni) is washed five times in 5-6 ml. of a hot 1% solution of NaHCO_3 and water. 10 ml. of H_2SO_4 (1:1) are added in small doses to the filtrate, evaporated in a Pe [sic!] or in a Ni cup until the salts are separated, and the mixture is diluted with water up to 25 ml. A small crystal of $\text{N}_2\text{H}_4 \cdot \text{H}_2\text{SO}_4$, ~15 ml. of concentrated H_2SO_4 , 2 ml. of a solution of quinalizarin (0.01 g. in 100 ml. of concentrated H_2SO_4) are added to 4 ml. of the solution thus obtained. It

Card 2/3

E-11

CZECHOSLOVAKIA / Analytical Chemistry. Analysis of Inorganic Substances. E

Abs Jour: Ref Zhur-Khim, No 12, 1959, 42100.

Abstract: is diluted with a concentrated solution of H_2SO_4 up to 25 ml. The solution is left standing for 30 minutes and measured with a photometer, using a S61 color filter in a 5 cm. vessel. The solution of the control experiment is used for comparison.
-- N. Turkevich.

Card 3/3

AUTHORS: Bieber, Boleslav, Engineer Doctor, ^{CZECH/34-59-8-10/16} Vejmlík, Bohuř, Engineer and Večeřa, Zdeněk, Doctor of Natural Sciences

TITLE: Determination of Carbon and Sulphur in Steel and Cast Iron by Means of High-frequency Combustion

PERIODICAL: Hutnické listy, 1959, Nr 8, pp 700 - 706

ABSTRACT: Experiments are described for determining the carbon and sulphur contents by means of a high-frequency generator designed for ascertaining the carbon content by burning in an oxygen stream, built by Siemens of Austria. Figure 2 shows the schematic diagram of the electrical circuit of the used HF generator. Figures 3 and 4 show photographs of the equipment and of the combustion tube. It was found that determination of carbon and sulphur contents in specimens of commercially pure iron by high-frequency burning in an oxygen stream has two considerable advantages compared with using a Mars silite furnace, namely, the equipment is instantaneously ready for carrying out experiments and a very considerable saving of electricity is achieved. The specimen, in the form of fine chips, is charged into a combustion "boat" which is

Card1/4

Determination of Carbon and Sulphur in Steel and Cast Iron by Means
of High-frequency Combustion

CZECH 54-59-8-10/16

placed into a protective tube inside a horizontal quartz tube in the heating coil of the instrument. The specimen is heated as a result of the hysteresis and eddy-current losses produced by the high-frequency field and then ignites and burns off in the oxygen stream. It is assumed that during combustion the temperature reaches about 1 000 °C. Tin or rose metal proved suitable as slag-forming additions. During the process of combustion, the combustion boat and the protective tube have to withstand a considerable heat shock and of the tested materials, fireclay proved suitable. For determining the carbon content in the combustion products after high-frequency heating in an oxygen stream, the gas-metering method according to ČSN (Czech Standard Specification) 42 0510A and the weight method, according to ČSN 42 0510B proved suitable; the obtained results are in good agreement with those obtained by the current method based on using a Mars furnace. For determining the sulphur content, the iodometric method, according to ČSN 42 0514 A, was tried out;

Card2/4

✓

CZECH/34-59-8-10/16

Determination of Carbon and Sulphur in Steel and Cast Iron by Means of High-frequency Combustion

the results were somewhat higher than those obtained under ordinary conditions of combustion in a Mars furnace at 1 350 °C and this is attributed to the higher combustion temperature at high frequency which does not leave behind sulphur residues in the molten^{and} burnt substance. The advantages of the high-frequency combustion will manifest themselves particularly in cases in which the carbon and sulphur contents have to be determined only at irregular intervals. The cost of the high-frequency equipment is considerably higher than that of a Mars furnace. Furthermore, it necessitates using fireclay combustion "boats" and protective tubes. There are 7 figures, 5 tables and 18 references, of which 9 are Czech, 8 English, and 1 Swedish.

Card3/4



Determination of Carbon and Sulphur in Steel and Cast Iron by Means
of High-frequency Combustion

CZECH 54-59-8-10/16

ASSOCIATION: Státní výzkumný ústav materiálu a technologie,
slévárenský výzkum, Brno (State Research Institute for
Materials and Technology, Foundry Research, Brno)

Card 4/4 -



VECERA, Zdenek; BIEBER, Boleslav

Photometric determination of small quantities of antimony
in cast iron. Slevarenstvi 11 no.7:272-274 JI '63.

1. Statni vyzkumny ustav materialu a technologie, Brno.

VECERA, Zdenek, RNDr.; BIEBER, Boleslav, inz., dr.

Photometric determination of small quantities of bismuth in technical iron. Hut listy 16, no. 9:667-669 S '61.

1. Statni vyzkumny ustav materialu a technologie, slovarensky vyzkum, Brno.

BIEBER, Boleslaw; VECERA, Zdenek

Complexometric simultaneous determination of calcium and magnesium.
Chem anal 6 no.1:17-22 '61. (EEAI 10:7)

1. State Research Laboratory of Raw Material and Technology, Brno,
Czechoslovakia.

(Complex compounds) (Calcium) (Magnesium)

BIEBER, B.; VECERA, Z.

Separation of calcium and magnesium in chelatometric determination.
Coll Cz chem 26 no.1:59-66 Ja '61. (EEAI 10:9)

1. Staatliches Forschungsinstitut für Material und Technologie, Brno.
(Calcium) (Magnesium) (Chelatometry)

S/137/62/000/011/035/045
A006/A101

AUTHORS: Bieber, Boleslav, Klaban, Jiří, Václavinec, Jiří, Věčeřa, Zdeněk

TITLE: A method of protecting the surfaces of molten iron alloys against oxidation

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 11, 1962, 120, abstract 11I787 P (Czechosl. Patent no. 99138 of March 15, 1961)

TEXT: The method of protecting molten Fe-alloy surfaces against oxidation consists in that low-melting B and (or) P compounds are introduced into the melt, and form on its surface a protective cover in which air-O₂ is dissolved. Chemically neutral, low-melting substances, such as NaCl or CaCl₂, may be added to the compounds to be introduced in amounts assuring a > 4% content of B or P compounds in the mixture. An approximate composition of the mixture is (in %) B₂O₃ 20, NaCl or CaCl 80. ✓

V. Levinson

[Abstracter's note: Complete translation]

Card 1/1

VELEBA, Zdenek

Distr: 4E2c

4

✓ Determination of uranium with cupferron in the presence of ammonium ethylenediaminetetraacetate. Juleslav Heber and Zdenek Veleba (Výzkumný ústav materiálu a technol., Brno, Czech.). *Chem. listy* 52, 430-43 (1958).—Sextivalent U is pptd. in neutral medium with cupferron (I) to give $UO_2(C_{12}H_{16}N_4O_4)_2 \cdot C_{12}H_{16}N_4O_4 \cdot 2H_2O$, whose ignition gives U_3O_8 . The majority of elements can be screened by $[CH_2N(CH_2CO_2NH_2)_3]_2$ (II) or by tartaric acid. Ti, Be, Zr, F, and CO₂ interfere. To det. U in ores and concentrates, weigh a 0.1-1 g. sample into a 400-ml. beaker, boil with 20 ml. concd. HNO₃, add 10 ml. concd. H₂SO₄, evap. on a sand bath until SO₃ starts escaping, cool, dil. with H₂O, filter off the ppts. of SiO₂, CaSO₄, or PbSO₄, treat the filtrate with an excess of II (prepd. by treating 29.11 g. Chelaton 2 with 200 ml. H₂O and 15.5 ml. 25-7% NH₄OH, and ailg. to 1 l.). Add NH₄OH to reach pH 7-8, ppt. the cold soln. with 2% aq. I, filter the ppt. with a white-band filter, wash with 0.2% I with II added (pH 7-8), dry and ignite the ppt. at 800-1000°. If larger amts. of Ti or Zr are present, they are pptd. together with U. The ppt. is dissolved in 20 ml. concd. HNO₃ and 10 ml. concd. H₂SO₄, evapd. until SO₃ evolves, the Ti and Zr are pptd. with I in a 10% H₂SO₄ soln., and U is pptd. with I in the neutralized filtrate. M. Hudlický

S8
1/1

VECERA, Z.; BIBER, B.

Photometric determination of low phosphorus content in aluminum alloys. p. 56.

HUTNICKE LISTY. (Ministerstvo hutního průmyslu a rudných dolů a
Československá vědecká společnost pro hutnictví a slevarenství)
Brno, Czechoslovakia, Vol. 14, No. 1, Jan. 1959.

Monthly List of East European Accession, (EEAI), LC, Vol. 8, No. 12, Dec. 1959.
Uncl.

CZECH/34-59-1-11/28

AUTHORS: Večeřa, Zdeněk, RNDr, Bieber, Boleslav, Ing.Dr.

TITLE: Photometric Determination of Small P Contents in Aluminium Alloys (Fotometrické stanovení malých obsahů fosforu ve slitinách hliníku)

PERIODICAL: Hutnické Listy, 1959, Nr 1, pp 56-58 (Czechoslovakia)

ABSTRACT: A method was evolved for determining the P content which is present as combined aluminium phosphide in Al alloys with an accuracy of $\pm 0.00002\%$ P in the case of contents of 10 000ths to 100 000ths of 1% in a charge of 1 g. The method is reliable and does not impose any special demands as regards instrument and chemicals. The determination takes 1.5 to 2 hrs and is not disturbed by elements which are usually present in Al alloys. There are 3 figures, 3 tables and 23 references, 5 of which are Czech, 3 English, 1 Soviet, 7 German, 6 French, 1 Polish.

ASSOCIATION: Státní výzkumný ústav materiálu a technologie, slevárenský výzkum, Brno (State Research Institute for Materials and Technology, Foundry Research, Brno) ✓

Card 1/1

COUNTRY : Czechoslovakia
CATEGORY :
ART. JOUR. : RZKhim., No. 22 1959, No. 73438
AUTHOR : Pinkava, J. and Vecera, Z.
INST. : Not given
TITLE : A Recording Calorimeter
ORIG. PUB. : Chem Prumysl, 9, No 3, 135-137 (1959)
ABSTRACT : The design of a calorimeter with continuous photographic temperature registration is described. The calorimeter proper is a Dewar vessel. The temperature measurements are made with a platinum resistance thermometer. The method used in making the measurements is described, diagrams are given for the various components, and experimental data are presented on the dissolution of cyclohexanone in water and on the neutralization of H_2SO_4 by ammonia.
Ya. Satunovskiy
CARD: 1/1

115

COUNTRY : Czechoslovakia 576
CATEGORY :
ABS. JOUR. : RZhKhim., No. 22 1959, No. 73316
AUTHOR : Bieber, B. and Vecera, Z.
INST. : Not given
TITLE : The Determination of Uranium with Cupferron in
the Presence of the Ammonium Salt of Ethylene-
diaminetetraacetic Acid
ORIG. PUB. : Collection Czechoslov Chem Commun, 24, No 4, 1074
-1079 (1959)
ABSTRACT : See RZhKhim, 1959, No 5, 15085.

CARD: 1/1

98

Distr: 4E2c

27 27

✓ Photometric determination of boron in iron. Zdeněk
 Večeřa and Boleslav Bieber (Státní výzkumný ústav ma-
 teriálu technol. slevárenské oddělení. Brno, Czech.).
 Hutnické listy 13, 808-11 (1958). — The sample is decompd. by
 melting with Na_2O_2 in a Ni crucible, and after leaching in
 water the insol. hydroxides are filtered off. The filtrate is
 evapd. in an alk. medium to the crystn. of salts. After the
 addn. of H_2SO_4 which dissolves the salts, B is photometri-
 cally detd. with the use of quinalizarin as indicator in the
 acidic medium. 33 references. Petr. Schneider

SB
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1

VECERA, Z

CZECHOSLOVAKIA/Analytical Chemistry - Inorganic Analysis.

E

Abs Jour : Ref Zhur Khiniya, No 20, 1959, 71246
Author : Vecera, Zdenek; Bieber, Boleslav
Inst : -
Title : Photometric Determination of Small Amounts of Phosphorus in Aluminum Alloys
Orig Pub : Hutn. listy, 1959, 14, No 1, 56-58

Abstract : For the determination of P in Al alloys the formation of the blue form of phosphomolybdic heteropolyacid was applied. For the construction of the calibration curve up to 0.002% P the standard $(\text{NH}_4)_2\text{HPO}_4$ solution (2.1315 g of salt per 1 liter; 1 ml of this solution contains 0.5 mg P) is diluted 100 times with water; to 0.8 - 4.0 ml of the resulting solution, diluted with water to 40 ml, 2 ml 1 N. H_2SO_4 and 5 ml ammonium molybdate solution (made by mixing 100 ml 5% ammonium molybdate solution with 100 ml 10 N. H_2SO_4) are added

Card 1/3

CZECHOSLOVAKIA/Analytical Chemistry - Inorganic Analysis.

E

Abs Jour : Ref Zhur Khimiya, No 20, 1959, 71246

and the mixture extracted with butanol (45-50 ml), the extract is washed 2 times with 40 ml portions 0.5 N.H₂SO₄, shaken with 40 ml 1 N H₂SO₄ and 0.5 ml SnCl₂ solution, allowed to stand for 2-3 minutes; the organic layer is diluted with butanol to 100 ml, allowed to stand for 20 minutes, and its absorbancy measured with a photometer using 5 cm cells at 720 m μ . For the construction of the calibration curve up to 0.0005% P the standard (NH₄)₂HPO₄ solution is diluted 1000 times with water; 1.0-10.0 ml of the resulting solution is diluted with water to 40 ml, shaken with 2 ml 1 N.H₂SO₄, 5 ml ammonium molybdate solution and 30 ml butanol, the organic layer is washed 2 times with 30 ml portions 0.5 N H₂SO₄, shaken with 30 ml 1 N.H₂SO₄, and 0.5 ml SnCl₂ solution, and its absorbancy measured. In the determination of P the sample (1 g) is mixed with 5 ml water,

Card 2/3

- 8 -

CZECHOSLOVAKIA/Analytical Chemistry - Inorganic Analysis.

E

Abs Jour : Ref Zhur Khimiya, No 20, 1959, 71246

placed into the apparatus, proposed by the authors; CO₂ is passed for 10-15 minutes (to remove O₂), 25 ml HCl (1:1) is added, and the gas liberated is absorbed in bromine water (35-40 ml). Towards the end of the dissolution of the sample CO₂ is passed for another 10-15 minutes, the resulting solution is boiled to remove excess Br₂, a small crystal of Na₂SO₃ is added, the solution is boiled for another 3 minutes, and the analysis is continued as for the construction of the calibration curves. The duration of the determination is 1.5-2 hours; the error is $\pm 0.00002\%$, Si does not interfere. -- N. Turkevich

Card 3/3

CZECH/34-59-8-10/16

AUTHORS: Bieber, Boleslav, Engineer Doctor, Vejmlék, Bohuš,
Engineer and Večeřa, Zdeněk, Doctor of Natural Sciences

TITLE: Determination of Carbon and Sulphur in Steel and Cast Iron
by Means of High-frequency Combustion

PERIODICAL: Hutnické listy, 1959, Nr 8, pp 700 - 706

ABSTRACT: Experiments are described for determining the carbon and sulphur contents by means of a high-frequency generator designed for ascertaining the carbon content by burning in an oxygen stream, built by Siemens of Austria. Figure 2 shows the schematic diagram of the electrical circuit of the used HF generator. Figures 3 and 4 show photographs of the equipment and of the combustion tube. It was found that determination of carbon and sulphur contents in specimens of commercially pure iron by high-frequency burning in an oxygen stream has two considerable advantages compared with using a Mars silite furnace, namely, the equipment is instantaneously ready for carrying out experiments and a very considerable saving of electricity is achieved. The specimen, in the form of fine chips, is charged into a combustion "boat" which is

Card1/4

Determination of Carbon and Sulphur in Steel and Cast Iron by Means
of High-frequency Combustion CZECH/34-59-8-10/16

placed into a protective tube inside a horizontal quartz tube in the heating coil of the instrument. The specimen is heated as a result of the hysteresis and eddy-current losses produced by the high-frequency field and then ignites and burns off in the oxygen stream. It is assumed that during combustion the temperature reaches about 1 000 °C. Tin or rose metal proved suitable as slag-forming additions. During the process of combustion, the combustion boat and the protective tube have to withstand a considerable heat shock amof the tested materials, fireclay proved suitable. For determining the carbon content in the combustion products after high-frequency heating in an oxygen stream, the gas-metering method according to ČSN (Czech Standard Specification) 42 0510A and the weight method, according to ČSN 42 0510B proved suitable; the obtained results are in good agreement with those obtained by the current method based on using a Mars furnace. For determining the sulphur content, the iodometric method, according to ČSN 42 0514 A, was tried out;

Card2/4



CZECH/34-59-8-10/16

Determination of Carbon and Sulphur in Steel and Cast Iron by Means of High-frequency Combustion

the results were somewhat higher than those obtained under ordinary conditions of combustion in a Mars furnace at 1 350 °C and this is attributed to the higher combustion temperature at high frequency which does not leave behind sulphur residues in the molten^{and} burnt substance. The advantages of the high-frequency combustion will manifest themselves particularly in cases in which the carbon and sulphur contents have to be determined only at irregular intervals. The cost of the high-frequency equipment is considerably higher than that of a Mars furnace. Furthermore, it necessitates using fireclay combustion "boats" and protective tubes. There are 7 figures, 5 tables and 18 references, of which 9 are Czech, 8 English, and 1 Swedish.

Card3/4



Determination of Carbon and Sulphur in Steel and Cast Iron by Means
of High-frequency Combustion

CZECU 34-59-8-10/16

ASSOCIATION: Státní výzkumný ústav materiálu a technologie,
slévárenský výzkum, Brno (State Research Institute for
Materials and Technology, Foundry Research, Brno)

Card 4/4 . -



VECERA, Z.

Determination of magnesium in spheroidal cast iron. Prace, p. 107,
SLEVARENSTVI (Ministerstvo strojirenstvi a Ministerstvo hutního
prumyslu a rudnych dolu) Praha, Vol. 3, No. 1, Jan. 1955

SOURCE: East European Accessions List (EEAL) Library of Congress,
Vol. 5, No. 12, December 1955

VECERA, Z.

Bieber, B.

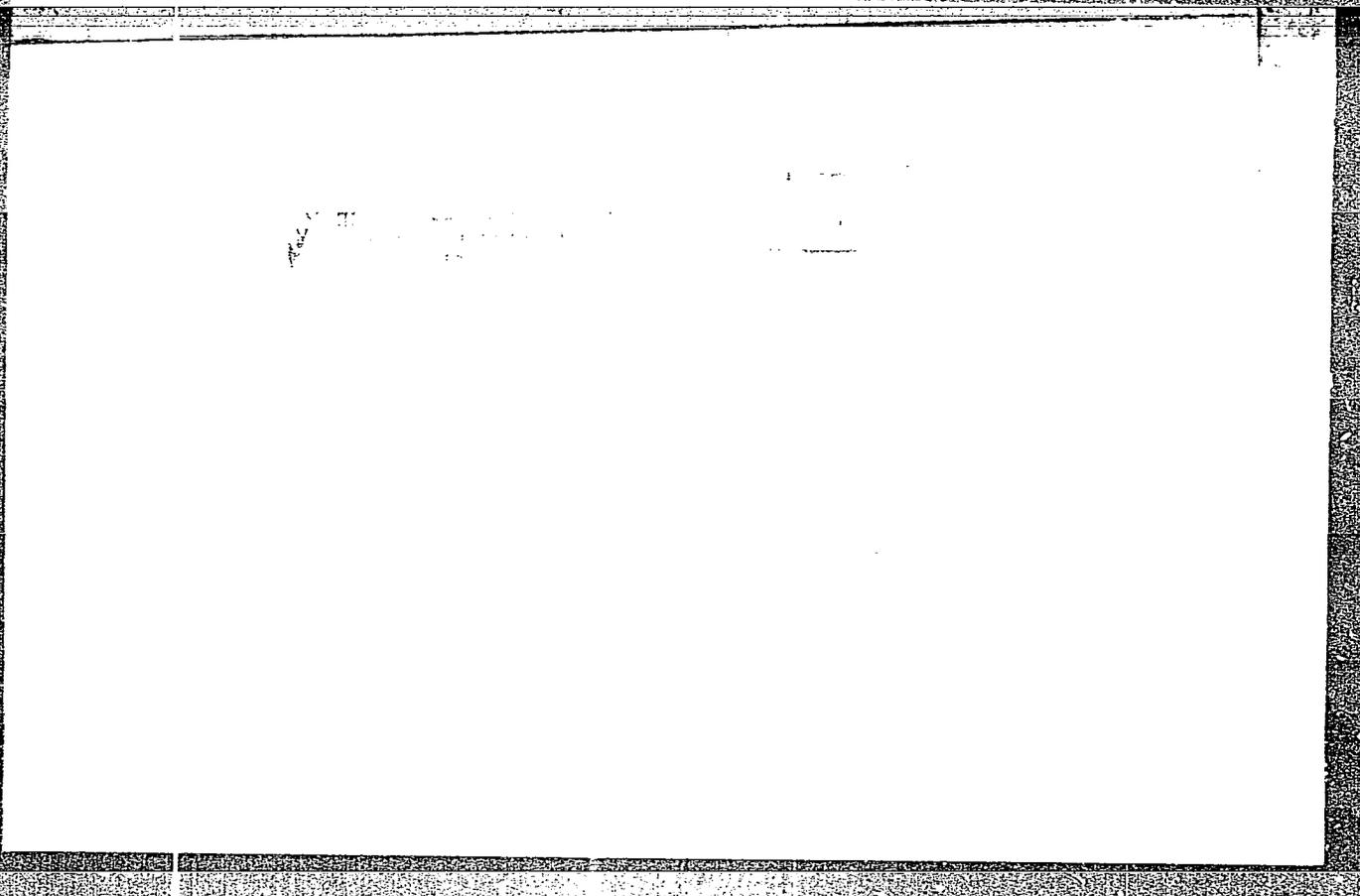
Separation and direct determination of titanium, iron, and aluminum
with cupferron and complexon III. Prace. p. 31.
SLEVARENSTVI, Prague, Vol. 3, no. 11, Nov. 1955.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 6,
June 1956, Uncl.

VECERA, Z.

Bieber, B.; Vecera, Z. Gravimetric determination of tin in copper alloys with the use of complexon III as a masking reagent. p. 48. SLEVARENSTIVI, Prague, Vol. 4, no. 2, Feb. 1956.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 6, June 1956, Uncl.



VECERA, Z.; BIEMER, B.

Determination of aluminum content through electrolysis on mercury cathode after separating disturbing elements. p. 419. HUTNICKE LISTY. Brno. Vol. 10, no. 7, July 1955.

SOURCE: East European Accessions List (EEAL), LC, Vol. 5, no. 3, March 1956.

VECERA, ZDENEK

Czechoslovakia/Analytical Chemistry - Analysis of Inorganic Substances, G-2

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61832

Author: Bieber, Boleslav; Vecera, Zdenek

Institution: None

Title: Gravimetric Determination of Tin in Copper Alloys With the Use of Complexon III as a Masking Agent

Original

Periodical: Vazkove stanoveni cinu ve slitinach medi za pouziti komplexonu III jako maskovaciho cinidla, Slevarenstvi, 1956, 4, No 2, 48-50; Czech; Russian, German, English, and French resumés

Abstract: For determination of Sn the sample (0.5-2 g) is dissolved with heating in 30 ml HCl (1:1) and several ml 40% H₂O₂, boiled, cooled, there are added Complexon III and 10 g NH₄NO₃, diluted to 100 ml, added NH₄OH (1:1) to pH 8-9; after ~18 hours filtered, precipitate washed with hot 1% (neutralized to methyl red) solution NH₄NO₃ and calcinated. In filtrate can be determined other metals: added 10 ml concentrated H₂SO₄, 10 ml concentrated HNO₃ and 10 ml 40% H₂O₂.

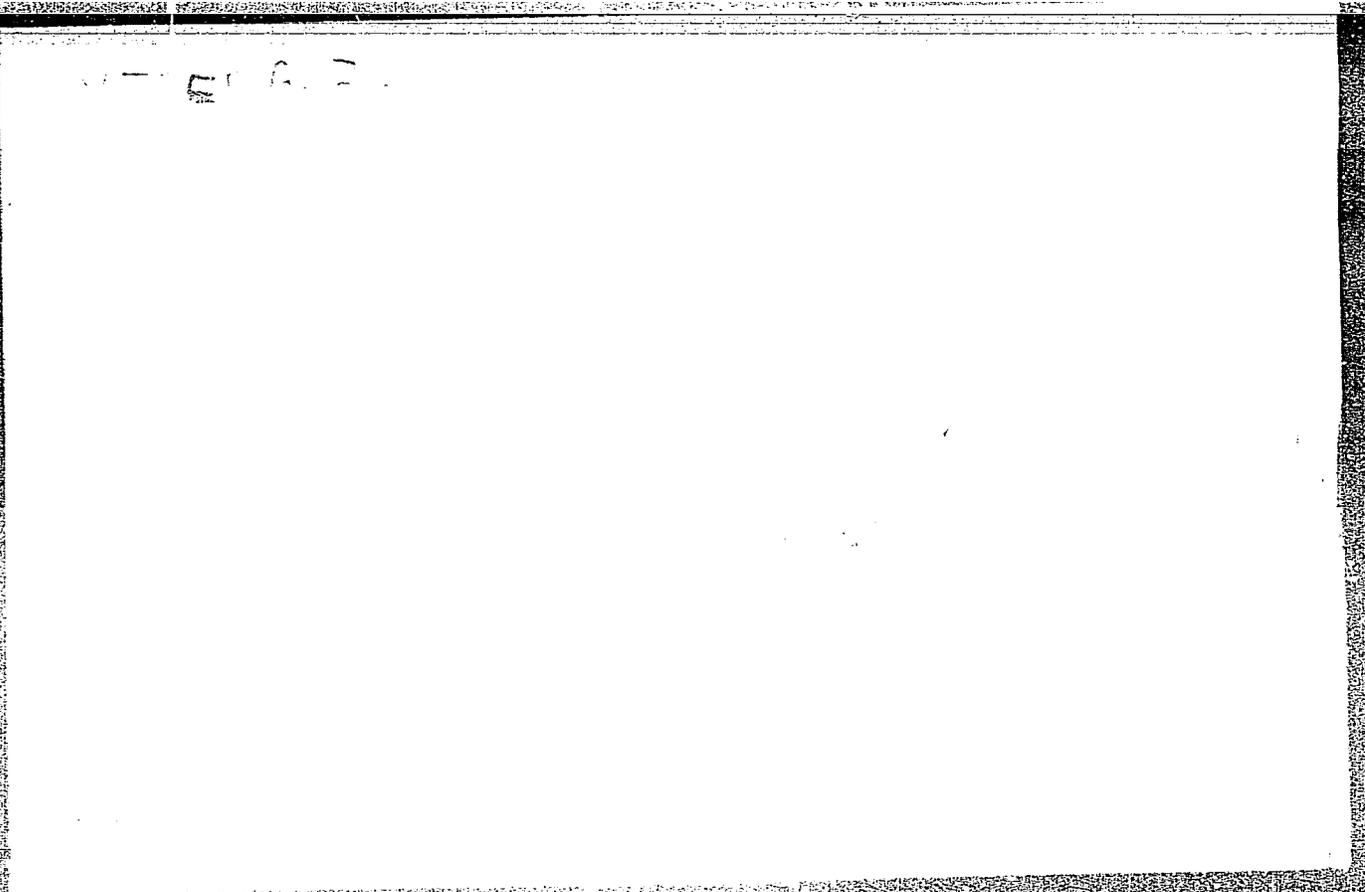
Card 1/2

Czechoslovakia/Analytical Chemistry - Analysis of Inorganic Substances, G-2

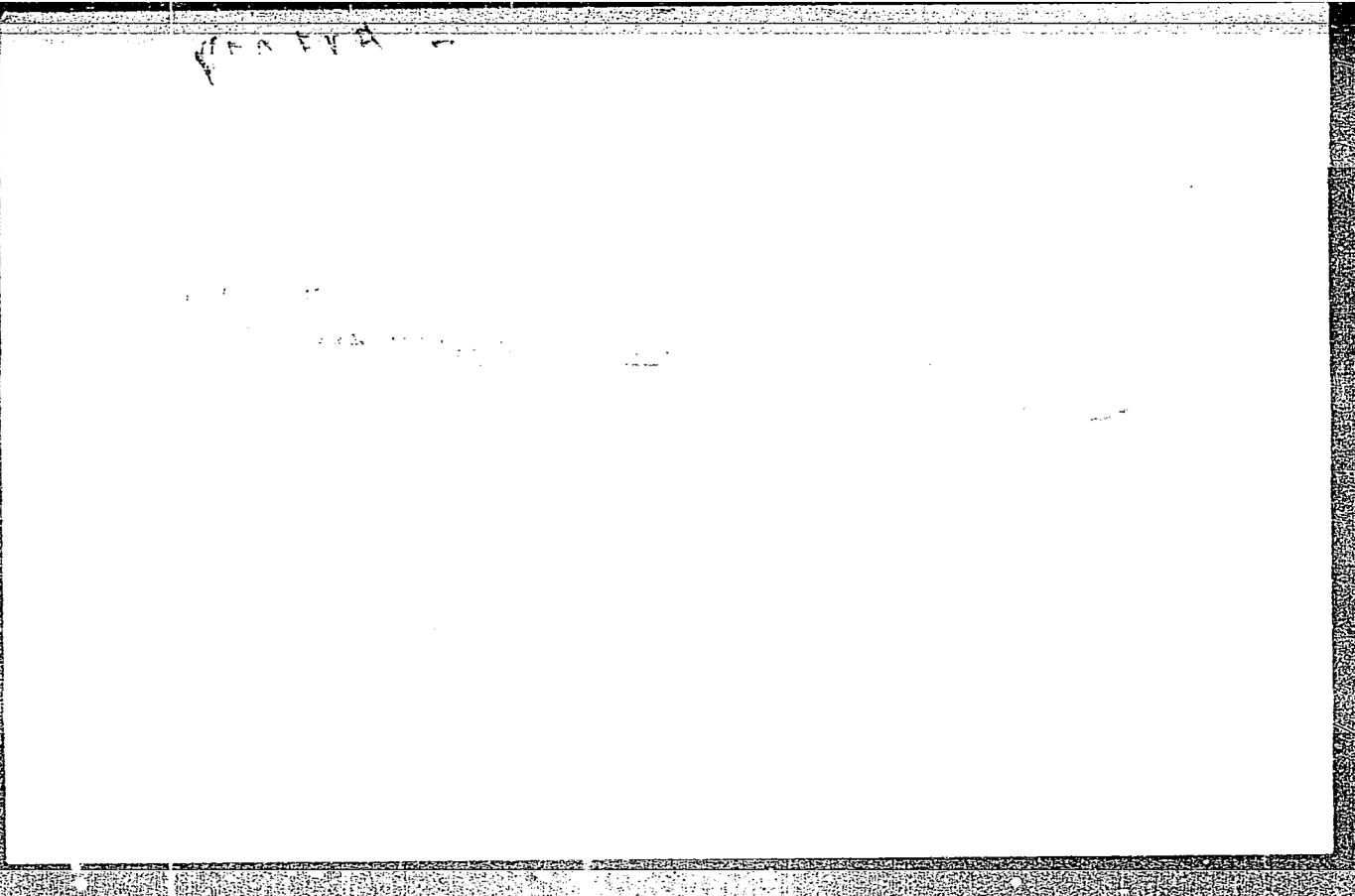
Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61832

Abstract: boiled, evaporated to evolution of SO_3 vapor, diluted to 200 ml, added 10 ml $\text{C}_2\text{H}_5\text{OH}$, PbSO_4 filtered off and in the solution are determined the other metals in the usual manner. Sb, Ti, Be, U interfere with determination. Error is from +0.03 to -0.04%.

Card 2/2



VEERA ZAENEK



Vecera, Z

Handwritten initials

878. A Broad-range viscometer. Z. Vecera (Povazska chemicka zavody, Zilina, Czechoslovakia). Chem. Listy, 1954, 48 (10), 1574. ---The Ubbelohde viscometer, modified by the addition of a second capillary of different diameter, is described, and tested by measuring the changed in viscosity of methylated caprolactam during polymerisation in the bulb of the instrument. The measured viscosity ranges from 1 to 1300 centipoises. G. Glaser.

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M.A. YOUTZ
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VEGERA, Z.

Chemical Abst.
Vol. 48 No. 8
A pr. 25, 1954
General and Physical Chemistry

3

Ternary diagram of the system water-cyclohexanone
oxime-ammonium sulfate. Z. Vegera and J. Plukava
(Povalecké chem. závody, Zlín, Czech.). *Chem. Listy*
47, 1231-3 (1953).—The two isotherms at 80° and 90°
were detd. by an analytical method. The soly. of the oxime
(I) in the sulfate (II) layer decreases rapidly with increasing
concn. of II and is practically zero in a nearly satd. soln. of
II. II is completely insol. in the conjugate phase of I.
The H₂O content in the I layer depends only slightly on the
II content of the conjugate phase and is always greater than
3%.

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The proposed method involves the decomposition of the sample in a Mars furnace in an O stream, and P₂O₅ by the photometric method with molybdate and vanadate. The proposed method saves the time necessary for the procedure of fusion and analysis of cupola slag in laboratory labs. and enables a better control of the fusion conditions in cupolas. The method can be also used for the analyses of silicates which decompose under the effect of acids having a similar composition to cupola slags, and for analyses of blast-furnace and steel-works slags, cement, etc. 20 references.

Petr Schneider

BIEBER, Boleslav, dr. inz. CSc.; VECERA, Zdenek, RNDr.

Use of the FES-1 photoelectric stylometer in metal analysis.
Hut listy 19 no.10:732-735 0 '64.

1. State Research Institute of Materials and Technology,
Welding Research, Brno.

BIEBER, B.; VECERA, Z.

Complexometric titrations (Chelatometry). Part 50: Determination of titanium in presence of hydrogen peroxide by means of xylenol orange. Coll Cz Chem 26 no.8:2081-2084 '61.

-1. Staatliches Forschungsinstitut für Material and Technologie, Brno.

HYNIE, I.; VECEREK, B.; WAGNER, J.

Fluorimetric determination of acetone in urine. Cas.lek.cesk. 99
no.3/4:88-89 22 Ja '60.

1. Ustav pro lekářskou chemii KU v Praze, přednosta prof.dr.
K. Kací.

(ACETONE urine)